Neal K Devaraj

List of Publications by Year
in descending order

93 papers	9,237 citations	61984 43 h-index	39675 94 g-index
111 all docs	111 docs citations	111 times ranked	8590 citing authors

#	Article	IF	Citations
1	Functionalizing Lipid Sponge Droplets with DNA**. ChemSystemsChem, 2022, 4, .	2.6	1
2	Controlling Protein Enrichment in Lipid Sponge Phase Droplets using SNAPâ€Tag Bioconjugation. ChemBioChem, 2022, 23, .	2.6	4
3	Site-Specific and Enzymatic Cross-Linking of sgRNA Enables Wavelength-Selectable Photoactivated Control of CRISPR Gene Editing. Journal of the American Chemical Society, 2022, 144, 4487-4495.	13.7	18
4	<i>In Situ</i> Assembly of Transmembrane Proteins from Expressed and Synthetic Components in Giant Unilamellar Vesicles. ACS Chemical Biology, 2022, 17, 1015-1021.	3.4	1
5	Rapid and Sequential Dual Oxime Ligation Enables De Novo Formation of Functional Synthetic Membranes from Waterâ€Soluble Precursors. Angewandte Chemie - International Edition, 2022, 61, .	13.8	4
6	Engineering materials for artificial cells. Current Opinion in Solid State and Materials Science, 2022, 26, 101004.	11.5	5
7	Light-activated tetrazines enable precision live-cell bioorthogonal chemistry. Nature Chemistry, 2022, 14, 1078-1085.	13.6	36
8	Lipase mimetic cyclodextrins. Chemical Science, 2021, 12, 1090-1094.	7.4	10
9	Membrane Mimetic Chemistry in Artificial Cells. Journal of the American Chemical Society, 2021, 143, 8223-8231.	13.7	46
10	Chemoenzymatic Generation of Phospholipid Membranes Mediated by Type I Fatty Acid Synthase. Journal of the American Chemical Society, 2021, 143, 8533-8537.	13.7	13
11	Introduction: Click Chemistry. Chemical Reviews, 2021, 121, 6697-6698.	47.7	122
12	Expression of Fatty Acyl-CoA Ligase Drives One-Pot <i>De Novo</i> Synthesis of Membrane-Bound Vesicles in a Cell-Free Transcription-Translation System. Journal of the American Chemical Society, 2021, 143, 11235-11242.	13.7	10
13	Synthesis of lipid membranes for artificial cells. Nature Reviews Chemistry, 2021, 5, 676-694.	30.2	46
14	Probing the Role of Chirality in Phospholipid Membranes. ChemBioChem, 2021, 22, 3148-3157.	2.6	18
15	Synthetic probes and chemical tools in sphingolipid research. Current Opinion in Chemical Biology, 2021, 65, 126-135.	6.1	6
16	Laccaseâ€Mediated Catalyzed Fluorescent Reporter Deposition for Liveâ€Cell Imaging. ChemBioChem, 2020, 21, 98-102.	2.6	0
17	A Small Molecule Fluorogenic Probe for the Detection of Sphingosine in Living Cells. Journal of the American Chemical Society, 2020, 142, 17887-17891.	13.7	18
18	Enzyme-free synthesis of natural phospholipids in water. Nature Chemistry, 2020, 12, 1029-1034.	13.6	54

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19	Lipid sponge droplets as programmable synthetic organelles. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 18206-18215.	7.1	37
20	Enzymatic RNA Biotinylation for Affinity Purification and Identification of RNAâ€"Protein Interactions. ACS Chemical Biology, 2020, 15, 2247-2258.	3.4	9
21	Enzymatic covalent labeling of RNA with RNA transglycosylation at guanosine (RNA-TAG). Methods in Enzymology, 2020, 641, 373-399.	1.0	6
22	Multiplexed Photoactivation of mRNA with Single-Cell Resolution. ACS Chemical Biology, 2020, 15, 1773-1779.	3.4	24
23	Inhibition of NRAS Signaling in Melanoma through Direct Depalmitoylation Using Amphiphilic Nucleophiles. ACS Chemical Biology, 2020, 15, 2079-2086.	3.4	5
24	Reversing a model of Parkinsonâ€™s disease with in situ converted nigral neurons. Nature, 2020, 582, 550-556.	27.8	316
25	Traceless native chemical ligation of lipid-modified peptide surfactants by mixed micelle formation. Nature Communications, 2020, 11, 2793.	12.8	10
26	Lipids: chemical tools for their synthesis, modification, and analysis. Chemical Society Reviews, 2020, 49, 4602-4614.	38.1	54
27	Designer Palmitoylation Motif-Based Self-Localizing Ligand for Sustained Control of Protein Localization in Living Cells and <i>Caenorhabditis elegans</i>. ACS Chemical Biology, 2020, 15, 837-843.	3.4	21
28	Temperature-Dependent Reversible Morphological Transformations in N-Oleoyl Î²-d-Galactopyranosylamine. Journal of Physical Chemistry B, 2020, 124, 5426-5433.	2.6	1
29	Tailoring the Shape and Size of Artificial Cells. ACS Nano, 2019, 13, 7396-7401.	14.6	94
30	Single-Chain Î²-<scp>d</scp>-Glycopyranosylamides of Unsaturated Fatty Acids: Self-Assembly Properties and Applications to Artificial Cell Development. Journal of Physical Chemistry B, 2019, 123, 3711-3720.	2.6	20
31	A minimal biochemical route towards de novo formation of synthetic phospholipid membranes. Nature Communications, 2019, 10, 300.	12.8	82
32	Lightâ€Activated Control of Translation by Enzymatic Covalent mRNA Labeling. Angewandte Chemie, 2018, 130, 2872-2876.	2.0	17
33	Optimization of ClpXP activity and protein synthesis in an E. coli extract-based cell-free expression system. Scientific Reports, 2018, 8, 3488.	3.3	12
34	Advances in Tetrazine Bioorthogonal Chemistry Driven by the Synthesis of Novel Tetrazines and Dienophiles. Accounts of Chemical Research, 2018, 51, 1249-1259.	15.6	170
35	Lightâ€Activated Control of Translation by Enzymatic Covalent mRNA Labeling. Angewandte Chemie - International Edition, 2018, 57, 2822-2826.	13.8	48
36	Approach control. Stereoelectronic origin of geometric constraints on N-to-S and N-to-O acyl shifts in peptides. Chemical Science, 2018, 9, 1789-1794.	7.4	11

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37	Site-Specific Covalent Conjugation of Modified mRNA by tRNA Guanine Transglycosylase. Molecular Pharmaceutics, 2018, 15, 737-742.	4.6	20
38	In Situ Lipid Membrane Formation Triggered by Intramolecular Photoinduced Electron Transfer. Langmuir, 2018, 34, 750-755.	3.5	10
39	Highly Stable Artificial Cells from Galactopyranose-Derived Single-Chain Amphiphiles. Journal of the American Chemical Society, 2018, 140, 17356-17360.	13.7	23
40	Communication and quorum sensing in non-living mimics of eukaryotic cells. Nature Communications, 2018, 9, 5027.	12.8	158
41	Amphiphile-Mediated Depalmitoylation of Proteins in Living Cells. Journal of the American Chemical Society, 2018, 140, 17374-17378.	13.7	14
42	Traceless synthesis of ceramides in living cells reveals saturation-dependent apoptotic effects. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 7485-7490.	7.1	28
43	The Future of Bioorthogonal Chemistry. ACS Central Science, 2018, 4, 952-959.	11.3	367
44	Biomimetic Generation and Remodeling of Phospholipid Membranes by Dynamic Imine Chemistry. Journal of the American Chemical Society, 2018, 140, 8388-8391.	13.7	40
45	Enzymatic Siteâ€Specific Labeling of RNA for Affinity Isolation of RNAâ€Protein Complexes. FASEB Journal, 2018, 32, 790.2.	0.5	0
46	In Situ Reconstitution of the Adenosine A2A Receptor in Spontaneously Formed Synthetic Liposomes. Journal of the American Chemical Society, 2017, 139, 3607-3610.	13.7	34
47	In Situ Synthesis of Phospholipid Membranes. Journal of Organic Chemistry, 2017, 82, 5997-6005.	3.2	15
48	Tension Promoted Sulfur Exchange for Cellular Delivery. ACS Central Science, 2017, 3, 524-525.	11.3	2
49	<i>De novo</i>vesicle formation and growth: an integrative approach to artificial cells. Chemical Science, 2017, 8, 7912-7922.	7.4	44
50	Continual reproduction of self-assembling oligotriazole peptide nanomaterials. Nature Communications, 2017, 8, 730.	12.8	17
51	Fluorescent turn-on probes for wash-free mRNA imaging via covalent site-specific enzymatic labeling. Chemical Science, 2017, 8, 7169-7173.	7.4	30
52	Developing a Fluorescent Toolbox To Shed Light on the Mysteries of RNA. Biochemistry, 2017, 56, 5185-5193.	2.5	13
53	Encapsulation of Living Cells within Giant Phospholipid Liposomes Formed by the Inverseâ€Emulsion Technique. ChemBioChem, 2016, 17, 886-889.	2.6	26
54	Spontaneous Phospholipid Membrane Formation by Histidine Ligation. Synlett, 2016, 28, 108-112.	1.8	8

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55	Nonenzymatic biomimetic remodeling of phospholipids in synthetic liposomes. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 8589-8594.	7.1	45
56	A Bioorthogonal Near-Infrared Fluorogenic Probe for mRNA Detection. Journal of the American Chemical Society, 2016, 138, 11429-11432.	13.7	168
57	Mining Proteomes Using Bioorthogonal Probes. Cell Chemical Biology, 2016, 23, 751-753.	5.2	0
58	Inverse Electron-Demand Dielsâ€“Alder Bioorthogonal Reactions. Topics in Current Chemistry, 2016, 374, 3.	5.8	94
59	Spontaneous Reconstitution of Functional Transmembrane Proteins During Bioorthogonal Phospholipid Membrane Synthesis. Angewandte Chemie - International Edition, 2015, 54, 12738-12742.	13.8	30
60	Towards Selfâ€Assembled Hybrid Artificial Cells: Novel Bottomâ€Up Approaches to Functional Synthetic Membranes. Chemistry - A European Journal, 2015, 21, 12564-12570.	3.3	40
61	Self-reproducing catalyst drives repeated phospholipid synthesis and membrane growth. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 8187-8192.	7.1	141
62	Electrochemical Control of Rapid Bioorthogonal Tetrazine Ligations for Selective Functionalization of Microelectrodes. Journal of the American Chemical Society, 2015, 137, 8876-8879.	13.7	38
63	SNAP-Tag-Reactive Lipid Anchors Enable Targeted and Spatiotemporally Controlled Localization of Proteins to Phospholipid Membranes. Journal of the American Chemical Society, 2015, 137, 4884-4887.	13.7	46
64	Site-Specific Covalent Labeling of RNA by Enzymatic Transglycosylation. Journal of the American Chemical Society, 2015, 137, 12756-12759.	13.7	76
65	Bioorthogonal Tetrazine-Mediated Transfer Reactions Facilitate Reaction Turnover in Nucleic Acid-Templated Detection of MicroRNA. Journal of the American Chemical Society, 2014, 136, 17942-17945.	13.7	130
66	Inâ€…Situ Synthesis of Alkenyl Tetrazines for Highly Fluorogenic Bioorthogonal Liveâ€Cell Imaging Probes. Angewandte Chemie - International Edition, 2014, 53, 5805-5809.	13.8	159
67	⁶⁸Ga chelating bioorthogonal tetrazine polymers for the multistep labeling of cancer biomarkers. Chemical Communications, 2014, 50, 5215-5217.	4.1	46
68	Synthesis and Reactivity Comparisons of 1â€Methylâ€3â€Substituted Cyclopropene Miniâ€tags for Tetrazine Bioorthogonal Reactions. Chemistry - A European Journal, 2014, 20, 3365-3375.	3.3	102
69	In Situ Vesicle Formation by Native Chemical Ligation. Angewandte Chemie - International Edition, 2014, 53, 14102-14105.	13.8	64
70	Fluorescent Liveâ€Cell Imaging of Metabolically Incorporated Unnatural Cyclopropeneâ€Mannosamine Derivatives. ChemBioChem, 2013, 14, 205-208.	2.6	103
71	Expanding room for tetrazine ligations in the in vivo chemistry toolbox. Current Opinion in Chemical Biology, 2013, 17, 761-767.	6.1	92
72	Rapid oligonucleotide-templated fluorogenic tetrazine ligations. Nucleic Acids Research, 2013, 41, e148-e148.	14.5	85

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73	Advancing Tetrazine Bioorthogonal Reactions through the Development of New Synthetic Tools. Synlett, 2012, 23, 2147-2152.	1.8	15
74	Membrane Assembly Driven by a Biomimetic Coupling Reaction. Journal of the American Chemical Society, 2012, 134, 751-753.	13.7	105
75	Metalâ€Catalyzed Oneâ€Pot Synthesis of Tetrazines Directly from Aliphatic Nitriles and Hydrazine. Angewandte Chemie - International Edition, 2012, 51, 5222-5225.	13.8	195
76	Liveâ€Cell Imaging of Cyclopropene Tags with Fluorogenic Tetrazine Cycloadditions. Angewandte Chemie - International Edition, 2012, 51, 7476-7479.	13.8	287
77	Reactive polymer enables efficient in vivo bioorthogonal chemistry. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 4762-4767.	7.1	171
78	Probing Intracellular Biomarkers and Mediators of Cell Activation Using Nanosensors and Bioorthogonal Chemistry. ACS Nano, 2011, 5, 3204-3213.	14.6	67
79	Biomedical Applications of Tetrazine Cycloadditions. Accounts of Chemical Research, 2011, 44, 816-827.	15.6	430
80	Bioorthogonal Turnâ€On Probes for Imaging Small Molecules inside Living Cells. Angewandte Chemie - International Edition, 2010, 49, 2869-2872.	13.8	386
81	Bioorthogonal chemistry amplifies nanoparticle binding and enhances the sensitivity of cell detection. Nature Nanotechnology, 2010, 5, 660-665.	31.5	319
82	Development of a Bioorthogonal and Highly Efficient Conjugation Method for Quantum Dots Using Tetrazineâˆ’Norbornene Cycloaddition. Journal of the American Chemical Society, 2010, 132, 7838-7839.	13.7	202
83	Fast and Sensitive Pretargeted Labeling of Cancer Cells through a Tetrazine/<i>trans</i>â€Cyclooctene Cycloaddition. Angewandte Chemie - International Edition, 2009, 48, 7013-7016.	13.8	341
84	¹⁸F Labeled Nanoparticles for <i>in Vivo</i> PET-CT Imaging. Bioconjugate Chemistry, 2009, 20, 397-401.	3.6	229
85	Tetrazine-Based Cycloadditions: Application to Pretargeted Live Cell Imaging. Bioconjugate Chemistry, 2008, 19, 2297-2299.	3.6	698
86	A Cytochrome c Oxidase Model Catalyzes Oxygen to Water Reduction Under Rate-Limiting Electron Flux. Science, 2007, 315, 1565-1568.	12.6	495
87	Syntheses of Hemoprotein Models that can be Covalently Attached onto Electrode Surfaces by Click Chemistry. Journal of Organic Chemistry, 2007, 72, 2794-2802.	3.2	54
88	Mixed Azide-Terminated Monolayers:Â A Platform for Modifying Electrode Surfaces. Langmuir, 2006, 22, 2457-2464.	3.5	354
89	Selective Functionalization of Independently Addressed Microelectrodes by Electrochemical Activation and Deactivation of a Coupling Catalyst. Journal of the American Chemical Society, 2006, 128, 1794-1795.	13.7	180
90	Rate of Interfacial Electron Transfer through the 1,2,3-Triazole Linkage. Journal of Physical Chemistry B, 2006, 110, 15955-15962.	2.6	121

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91	Chemoselective Covalent Coupling of Oligonucleotide Probes to Self-Assembled Monolayers. Journal of the American Chemical Society, 2005, 127, 8600-8601.	13.7	215
92	â€œClickingâ€•Functionality onto Electrode Surfaces. Langmuir, 2004, 20, 1051-1053.	3.5	464
93	Rapid and Sequential Dual Oxime Ligation Enables De Novo Formation of Functional Synthetic Membranes from Waterâ€Soluble Precursors. Angewandte Chemie, 0, , .	2.0	0